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Portfolio DE LUXE

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POTOMAC REFINING COMPANY
66 WEST 35TH STREET, NEW YORK

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A. B. YOUNG

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Portfolio de luxe

TWENTY FEET BELOW THE SURFACE.

In the upper left-hand corner two men are shown quarrying *lime stone* on the Paul Jones ledge. The two men by the ladder are digging *ochre*. The car coming out of the tunnel is filled with *tripoli*. The men in the foreground are loading *manganese*.

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BIRD'S EYE VIEW OF OUR WORKS

This photograph is taken from the Paul Jones ledge of lime stone, and looks southeast across our workings. In the lower left-hand corner of the picture is shown the beginning of this ledge, which is ⅛ of a mile wide and extends for over ¾ of a mile. At the lower right-hand corner is an immense deposit of tripoli, ochre and manganese all intermixed, and waiting only to be separated and refined. The workmen in the foreground are loading a small car which holds 24 feet of material, and which yields from 300 to 1000 pounds of pure manganese. Emerging from the tunnel below the ladder, is shown a careload of tripoli. The entire bank alongside this car is solid tripoli, 100 feet wide and 75 feet deep. Bordering this tripoli, along its entire length and mixed with it is the manganese.

Some idea of our methods of operation can be obtained from this picture. Note how the three tracks all converge, uniting into one track which passes the engine house and goes on to the refinery which lies just beyond and is located directly on the C. & O. canal. Two shafts are also shown, and the boom and hoisting apparatus which is used for hoisting material out of either shaft. Alongside of the upper shaft is the pump house, with its equipment of two engines and three pumps. Directly behind the engine house where the tracks converge is seen the derrick which swings over the canal and is used for loading and unloading canal boats.

No. 6. NEAR VIEW OF CARS AND OPEN CUT

The right hand car is emerging from the tunnel with a load of tripoli. The deposit to the right of this car contains manganese and the two boulders beside the middle man are almost pure manganese, weighing over 300 pounds each. The over-hanging rock is part of the Paul Jones ledge of lime stone

THIRTY FEET BELOW THE SURFACE

DIGGING OUT THE TRIPOLI MIXED WITH MANGANESE

Very few people realize how necessary manganese is in many of the most important industries. It is absolutely necessary, for instance, in the manufacture of steel. The great steel companies of the United States and Europe use thousands of tons of manganese. 99% of the manganese used in this country has to be imported from Russia, Spain, India and South America. With the exception of the enormous deposit owned by the Potomac Refining Co., there is no high grade manganese in this country. Even the famous Cremora deposits which are located near our property, and which have shipped over $3,000,000 worth of manganese, produce a far inferior grade, running less than 50% of metallic manganese, as compared to the 63% of metallic manganese found in our deposits.

The Cramp shipyards which are known the world over, make their largest profit, not from building battleships, but from manufacturing manganese bronze. Manganese is also used in the manufacture of pottery and glass, in the manufacture of electrical batteries, varnishes, and in a vast number of chemical preparations.

It is one of the absolutely essential metals, for there is no substitute.

Our manganese deposits alone are of sufficient value to pay dividends of many hundreds of thousands of dollars.

FORTY FEET BELOW THE SURFACE

Manganese overhead, on both sides and underneath.

FIFTY FEET BELOW THE SURFACE

Manganese overhead, underneath and to the left, with tripoli to the right.

ONE END OF OUR PRESENT REFINERY

The car is being dumped into the concentrator, so that the ochre, tripoli and marl can be washed out of the manganese. The track running along the left-hand side is for bringing the lime stone to the kilns.

INTERIOR OF ONE OF THE BUILDINGS (73 feet long)

Almost directly in front is seen a 26 foot double concentrator. The rolls revolve 32 times a minute and carry chilled steel blades which separate the tripoli and ochre from the manganese. One of the workmen is shown wheeling away 300 lbs. of manganese after it has passed through the concentrator. The concentrator has an output capacity of 36,000 lbs. of manganese every day of ten hours, without counting the ochre or tripoli. Overhead is the cooper shop, and directly beyond is an 85 H. P. boiler.

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VIEW OF A PORTION OF ENGINE ROOM AND WORK SHOP

This engine is a 50 H. P. Atlas and receives steam direct from the 85 H. P. boiler. The line shaft from main belt carries power to all points for concentrating, jigging, crushing, classifying, etc.

The power furnished is several times more than required for all purposes, with steam in proportion.

Overhead is the storeroom for barrel hoops and staves.

To the left is the sawmill in which all the boards used in the building have been sawed. (The stocking hanging up is a freak of nature, it is a board cut from a cypress tree.)

OUR VAST BARRIER LE

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"A thousand men could only dent it if they quarried for
confused with the *Paul Jones Ledge*, which is a separate
In the distance to the right is shown the refinery. N
materials, and for loading them direct on the canal boats

EDGE OF LIME STONE

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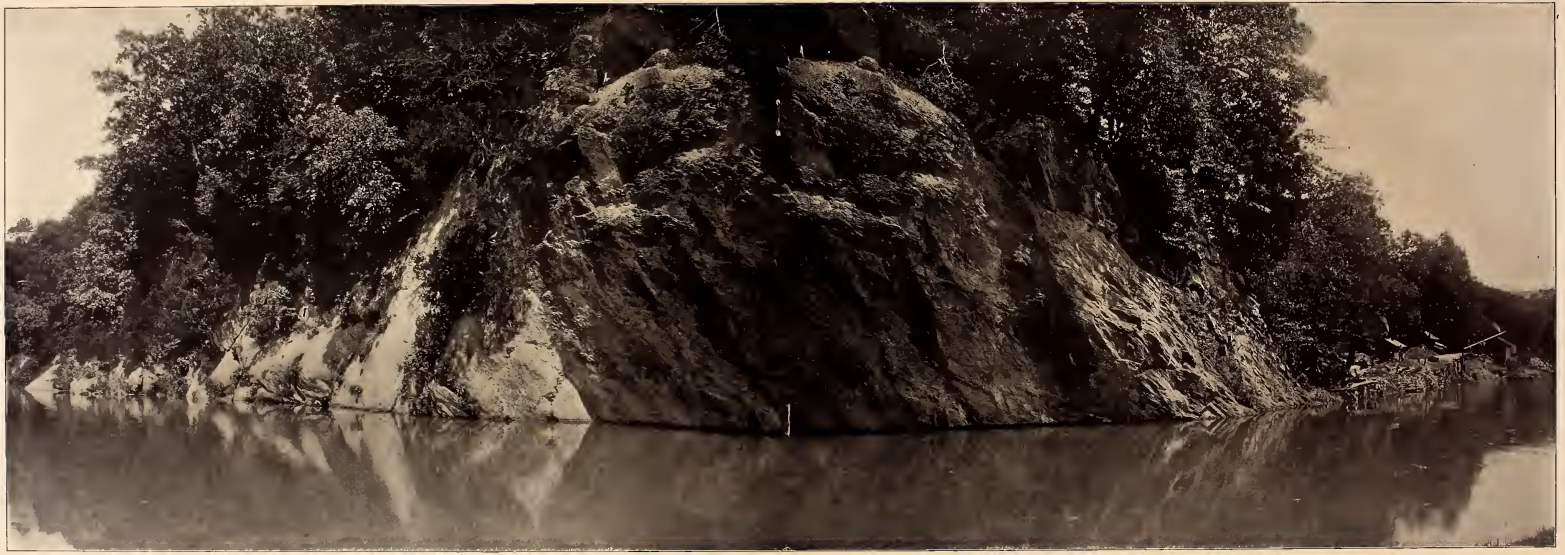


OUR VAST BARRIER LEDGE OF LIME STONE

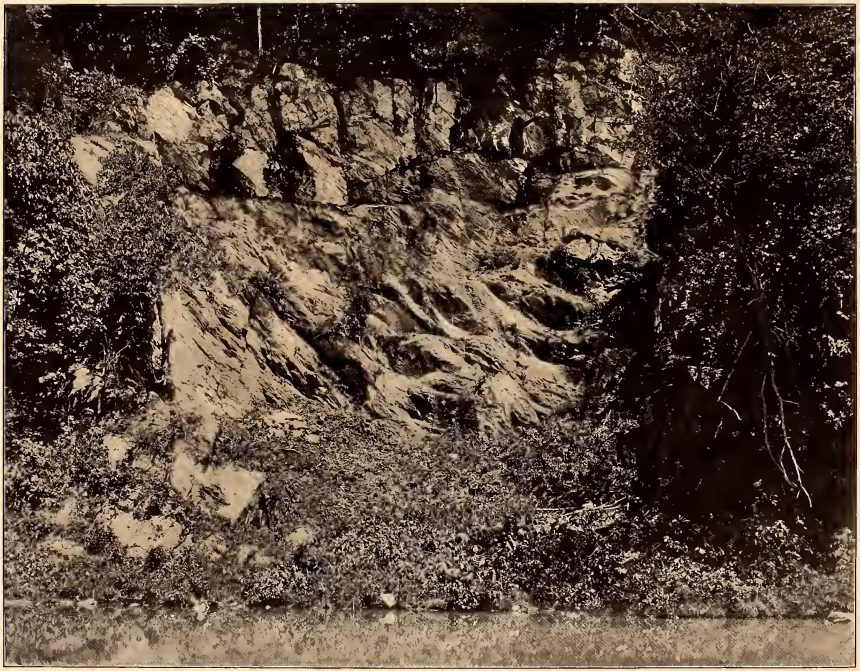
This mountain is solid lime stone of the finest quality and it extends back from the canal ¾ of a mile. "A thousand men could only dent it if they quarried for a hundred years." This Barrier Ledge must not be confused with the ***Paul Jones Ledge***, which is a separate deposit of almost equal size. In the distance to the right is shown the refinery. Note it's ideal location for handling our various raw materials, and for loading them direct on the canal boats.

MANGANESE JUST FROM THE CONCENTRATOR

Some of it is in lumps or kidneys that weigh 300 to 500 lbs. each, some of it is like gravel or sand, and some of it is the finest kind of a steel blue powder, so fine that you can blow it away, and yet so heavy that 1,200 lbs. can be packed in a barrel.

LOOKING ACROSS THE CANAL TOWARD OUR BUILDINGS AND WORKS

This picture only shows some of the buildings. The rest are hidden behind the trees. But above these buildings on the slope of the hill-side, where it can be handled by gravity is a mountain of shale. What is that for?—you may ask. Well it means just this. If you eliminated every other one of our products, and just combined the mountain of lime stone with the mountain of shale, you would produce Portland cement.



A SOLID LEDGE OF FLUXING ROCK

This picture shows just one little corner of a deposit of 90% calcium carbonate, which is used in iron and steel furnaces as a fluxing rock. This one deposit alone represents dividends of hundreds of thousands of dollars.

ONE OF OUR IRON DEPOSITS

The man in this picture has his hand on a solid ledge of iron 29 inches thick and which runs over 56% of metallic iron. The Virginia ore banks which are just across the river have shipped ore from this same strata for over a hundred years. Note the face in the rock directly above the figure. This is a natural phenomenon and according to the natives represents a sphinx, guarding the mountain's treasure.

OUR MARBLE OUT-CROPPING

This is an out-crop of calcite combined with marl, which a little higher up the slope has been metamorphosed by heat into a rare marble of a beautiful onyx color. The upper out-crop shows a deposit 60 feet wide which undoubtedly extends down to basic rock. Some idea of the value of this deposit may be gathered from the fact that the greatest Southern authority on marble states that it is worth $3.00 per cubic foot.

TAKEN FROM THE RIVER'S EDGE LOOKING NORTH ACROSS THE POTOMAC

In the foreground is a canal steamboat loaded with lime stone bound for Washington, where the lime stone will be calcinated or burned and sold for building lime. The distance from the Potomac Refining Co.'s property to Washington is 65 miles. The background shows the Potomac Refining Co.'s property, rising East and West from the C. & O. canal and the Potomac River and extending northward over the knob or ridge.

THE KNOPP LIME STONE QUARRY

Quarrying lime stone at Knopps Quarry, where they have been steadily digging it out for 96 years. This property is located only a few hundred yards from the Potomac deposits.

TAKEN FROM THE SUMMIT OF THE POTOMAC REFINING CO.'S PROPERTY LOOKING WEST

In the distance are shown the Bakerton Lime Kilns, which run day and night, all the year around, and produce over 7,000 bushels of lime every 24 hours. The profits of this property are said to be $500,000.00 per year.

LOOKING SOUTH FROM THE POTOMAC REFINING CO.'S PROPERTY

Just across the River are seen the Virginia Ore Banks, which are owned by the Hon. J. E. Thropp, one of the wealthiest men in America.

ABOVE THE VIRGINIA ORE BANKS

This view is taken looking straight North across the Potomac River to the property of the Potomac Refining Co. The ore produced from these Virginia Ore Banks is of such high-grade, that it is used mainly to increase the quality of pig iron produced at the furnaces at Everett, Penn. These ore banks have produced thousands of tons a year for nearly 100 years. They are located on the same strata that runs through the Potomac Company's property.

AFTER THE WHISTLE BLOWS AT THE REFINERY

Showing the type of native American workmen that we employ.